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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,817	12/08/2008	Lars Jorneus	NOBELB.244NP	8735

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EXAMINER

EIDE, HEIDI MARIE

ART UNIT	PAPER NUMBER
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3732

NOTIFICATION DATE	DELIVERY MODE
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02/08/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/583,817	Applicant(s) JORNEUS ET AL.	
	Examiner HEIDI M. EIDE	Art Unit 3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 December 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5-9 and 13-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-9 and 13-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 December 2010 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/16/2010</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on December 16, 2010 is noted. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

2. The drawings were received on December 30, 2010. These drawings are accepted.

Specification

3. The amendments to the specification received on December 30, 2010 have been accepted and entered.

4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The limitation of the groove being greater than 20%. Support for them being 20% or more can be found, but not more than 20%, which does not includes 20%.

Claim Objections

5. Claim 6 objected to because of the following informalities: On line 3 of the claim "the peripheral surface" is believed to be in error for --the one or more peripheral surface--. Appropriate correction is required.

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6. Claim 9 objected to because of the following informalities: On line 3 of the claim "the peripherally extending surfaces" is believed to be in error for --the one or more peripheral surface--. Appropriate correction is required.

7. Claim 20 is objected to because of the following informalities: Claim 20 depends from itself. For examination purposes, claim 20 is assumed to be depending from claim 19. Appropriate correction is required.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 1-2, 6-9, 13-14, 17-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ricci et al. (6,417,491) in view of Dinkelacker (6,364,663).

10. Ricci teaches a dental implant for inserting into a hole formed in a jaw bone and exposure to an impinging force or impinging forces, the dental implant comprising a threaded lower portion 46 and a collar 152 or one or more peripherally extending surface 152 which are arranged at an upper portion of the dental implant above the threaded lower portion and are configured to be placed against a jaw bone part at an outlet opening of the hole (fig. 27), wherein the one or more peripherally extending surfaces are provided with a pattern of grooves and recesses (col. 7, ll. 1-11, col. 11, ll. 6-18), the patter of grooves and recesses including grooves and recesses extending in

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at least two directions of inclination (fig. 6). Ricci teaches the invention a substantially claimed and discussed above, however, does not specifically teach at least a portion of the pattern of grooves and recesses being inclined with respect to a longitudinal axis of the implant and an axis extending perpendicular to the longitudinal axis of the implant and wherein the grooves and recesses have a depth which lies in the range of about 50-100 μm and a width in the ranges of about 100-150 μm .

11. Dinkelacker teaches a dental implant wherein a pattern of grooves and recesses being inclined with respect to a longitudinal axis of the implant and an axis extending perpendicular to the longitudinal axis of the implant (fig. 8, 13, col. 2, ll. 8-19) and wherein the grooves and recesses have a depth which lies in the range of about 50-100 μm and a width in the ranges of about 100-150 μm (col. 3, ll. 40-45). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the implant taught by Ricci with the size and arrangement of the pattern of grooves and recesses in order to secure against axial shifting and rotation of the implant after healing.

12. With respect to claims 2 and 20, Ricci further teaches wherein the pattern of grooves and recesses forms a closed loop that divides an upper part and a lower part of the upper portion of the implant capable of preventing ingress of bacteria from the upper portion to a lower portion of the implant (figs. 1-6, the horizontal grooves/recess form a closed loop and are capable of preventing bacteria from traveling vertically downward towards the lower portion of the implant). With respect to claim 6, Ricci further teaches the pattern comprises straight and parallel groove parts with at least two directions of

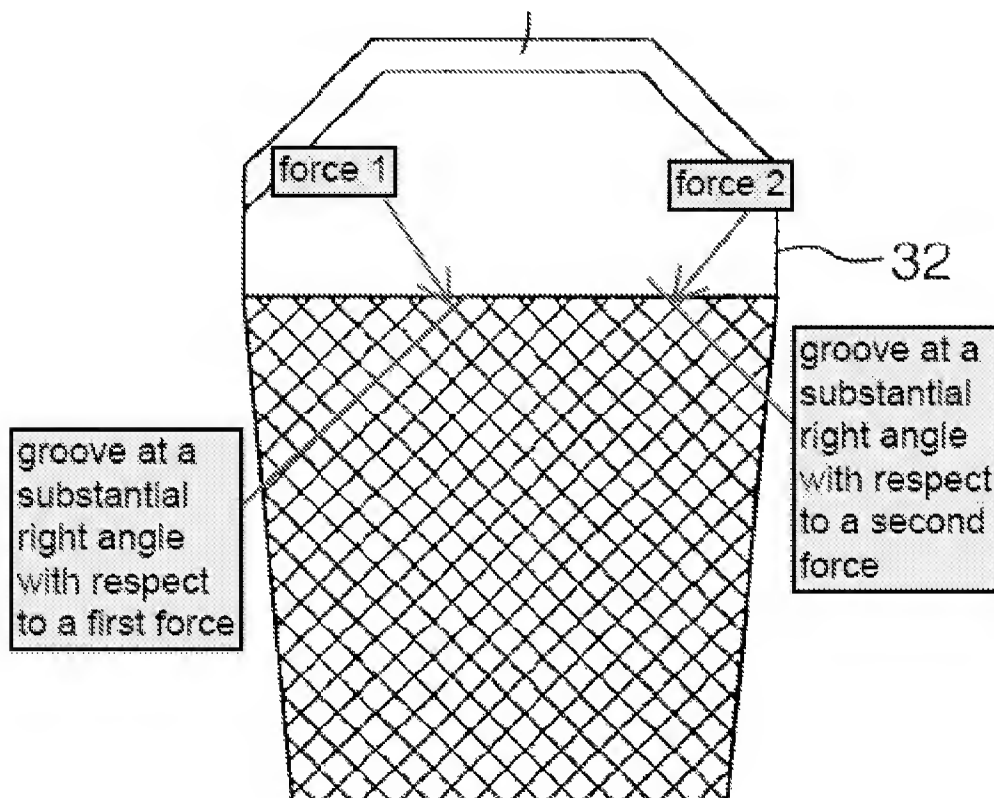
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inclination, the pattern being arranged around all of the one or more peripheral surface (fig. 6, 27). With respect to claims 9 and 14, Ricci further teaches wherein the peripherally extending surfaces are formed on a flange arrangement (fig. 27) and wherein the flange arrangement is cylindrical (fig. 27). With respect to claims 17 and 21, Ricci further teaches wherein greater than 20% of a given groove is included relative to the longitudinal axis of the implant (fig. 1, all of the grooves, i.e. 100% are inclined 90 degrees from the longitudinal axis). With respect to claims 18 and 22, Ricci further teaches wherein the grooves of the pattern intersect with each other (fig. 6). Ricci teaches the invention as substantially claimed and discussed above, however, does not specifically teach wherein when the implant is exposed to forces with mutually different directions, a first part of the groove is substantially at right angles in relation to a first force direction and a second part of the pattern is substantially at right angles in relation to a second force direction.

13. Dinkelacker teaches wherein when the implant is exposed to forces with mutually different directions, a first part of the groove is substantially at right angles in relation to a first force direction and a second part of the pattern is substantially at right angles in relation to a second force direction (see figure below). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the implant taught by Ricci with the arrangement of the pattern of grooves and recesses in order to secure against axial shifting and rotation of the implant after healing. With respect to claims 7-8 Ricci/Dinkelacker does not specifically teach the pattern comprises sinusoidal groove recess parts and where the pattern comprises one or more groups of

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groove arrange mutually parallel with different longitudinal extents, however, at the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to arrange the grooves as claimed because Applicant has not disclosed that pattern provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Ricci/Dinkelacker implant, and applicant's invention, to perform equally well with either pattern taught by Ricci/Dinkelacker or the claimed pattern because both patterns would perform the same function of promoting bone growth. Therefore, it would have been prima facie obvious to modify Ricci/Dinkelacker to obtain the invention as specified in claims 7-8 because such a modification would have been considered a mere design consideration which fails to patentably distinguish over the prior art of Ricci/Dinkelacker.



14. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ricci et al. (6,419,491) in view of Dinkelacker (6,364,663) as applied to claim 1 above, and further in view of Aravena et al. (2004/0121286).

15. Ricci/Dinkelacker teaches the invention as substantially claimed and discussed above, however, does not specifically teach an upper portion has an inner socket which is polygonal, toothed or with two or more wings and the grooves are arranged at the parts of grater material thickness at the upper portion.

16. Aravena teaches an upper portion having an inner socket 28 which is polygonal (fig. 2) and the grooves 22 are arranged at part of greater material thickness at the upper portion (par. 26). It would have been obvious to one having ordinary skill in the art

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at the time of the invention to modify the implant taught by Ricci with an inner socket taught by Aravena in order to allow for an anti-rotation attachment feature for an abutment.

17. Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ricci et al. (6,419,491) in view of Dinkelacker (6,364,663) as applied to claim 9 above, and further in view of Wöhrle (6,283,754).

18. Ricci/Dinkelacker teaches the invention as substantially claimed and discussed above, however, does not specifically teach the flange arrangement is conical or scalloped.

19. Wöhrle teaches an implant with a flange arrangement which is conical and scalloped (figs. 6-7, 9-12). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the shape of the flange taught by Ricci with the shape taught by Wöhrle in order to follow the natural occurring bone morphology.

Response to Arguments

20. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

21. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HEIDI M. EIDE whose telephone number is (571)270-3081. The examiner can normally be reached on Mon-Thurs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cris Rodriguez can be reached on 571-272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Heidi Eide
Examiner
Art Unit 3732

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Examiner, Art Unit 3732

1/31/2010

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